

DOCKET NO: 229893US26

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :
JEAN-PIERRE YQUEL, ET AL. : EXAMINER: DERAQSHANI, PHILIPPE
SERIAL NO: 10/663,756 :
FILED: SEPTEMBER 17, 2003 : GROUP ART UNIT: 3754
FOR: VARIABLE-FLOW TILT VALVE :
AND CONTAINER FITTED WITH SUCH
A VALVE

APPEAL BRIEF WITH APPENDICES

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

This is an appeal from a final Office Action mailed April 25, 2007. A Notice of Appeal was timely filed on July 25, 2007.

I. REAL PARTY IN INTEREST

The real party in interest in this appeal is L'Oreal having an address at 14, rue Royale, F-75008, Paris, France. L'Oreal is the real party in interest by way of assignment recorded in the U.S. Patent and Trademark Office at reel 014982, frame 0240.

II. RELATED APPEALS AND INTERFERENCES

Appellants, Appellants' legal representative and the assignees are aware of no appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

Claims 1- 57 are pending. Claims 5, 7, 23, 28, and 30-42 were withdrawn from consideration. Claims 1-4, 6, 8-22, 24-27, 29, and 43-57 stand rejected, and the rejection of Claims 1-4, 6, 8-22, 24-27, 29, and 43-57 is herein appealed.

IV. STATUS OF AMENDMENTS

In a Final Office Action mailed April 25, 2007 (hereinafter “Final Action”), the Examiner finally rejected Claims 1-4, 6, 8-22, 24-27, 29, and 43-57. No amendments to the claims have been submitted after the mailing of the Final Action. The attached Appendix VII reflects Claims 1-4, 6, 8-22, 24-27, 29, and 43-57 as presently pending on appeal.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER¹

The claimed invention, as recited in independent Claim 1, is directed to a tilting valve for dispensing a product from a pressurized container. Examples of the claimed tilting valve are shown in Figures 3A-3C and 4, for example. The tilting valve includes an opening/closing element (14) with at least two inlet apertures (18c and 18b).² The opening/closing element is capable, in response to a force transmitted to the opening/closing element laterally to a longitudinal axis (X) of the tilting valve, of moving from a closed position to a first open position in which the product under pressure is dispensed at a first flow rate.³ The opening/closing element is capable, in response to a force transmitted to the opening/closing element parallel to the longitudinal axis, of moving from the closed position

¹ It is Appellants' understanding that, under the rules of Practice before the Board of Patent Appeals and Interference, 37 C.F.R. § 41.37(c) requires that a concise explanation of the subject matter recited in each independent claim be provided with reference to the specification by page and line numbers and to the drawings by reference characters. However, Appellant's compliance with such requirements anywhere in this document should in no way be interpreted as limiting the scope of the invention recited in all pending claims, but simply as non-limiting examples thereof.

² See Appellants' originally filed specification at page 9, paragraph [0039], for example.

³ See Appellants' originally filed specification at page 9, paragraph [0042], for example.

to a second open position in which the product is dispensed at a second flow rate different from the first flow rate.⁴

The claimed invention, as recited in Claim 17, is directed to a valve for dispensing a product. Examples of the claimed valve are shown in Figures 3A-3C and 4, for example. The valve includes a body (11), a sealing portion (13) coupled to the body, and a stem (14) coupled to the sealing portion.⁵ The stem is radially movable from a closed position to a first open position and axially movable from the closed position to a second open position.⁶ The stem has a passage (18) emerging at an outlet opening (31), a first inlet opening (18b), and a second inlet opening (18c).⁷ The valve also includes a peripheral portion (15) coupled to the stem and to the sealing portion so as to define a peripheral space (17) around the stem.⁸ The peripheral space is isolated from an interior space of the body in the closed position and is open to the interior space in the first and second open positions.⁹ The first inlet opening communicates with the peripheral space in the closed position, and the second inlet opening bears against the sealing portion in the closed position.¹⁰

The claimed invention, as recited in Claim 43, is directed to a device for dispensing a product. The device includes a body (11), a sealing portion (13) coupled to the body, and a stem (14) coupled to the sealing portion. The stem has a passage (18) emerging at an outlet opening (31), a first inlet opening (18b), and a second inlet opening (18c), and a dispensing head (30) coupled to the stem.¹¹ The channel emerges into the dispensing head at the outlet opening.¹² The dispensing head (30) includes a first bearing portion (32) at a distance from a longitudinal axis (X) of the stem so that the stem tilts to a first open position when pressure is

⁴ See Appellants' originally filed specification at page 10, paragraph [0043], for example.

⁵ See Appellants' originally filed specification at page 8, paragraphs [0036]-[0038], for example.

⁶ See Appellants' originally filed specification at pages 9-10, paragraphs [0041]-[0043], for example.

⁷ See Appellants' originally filed specification at page 9, paragraphs [0039]-[0040], for example.

⁸ See Appellants' originally filed specification at page 8, paragraph [0038], for example.

⁹ See Appellants' originally filed specification at page 9, paragraphs [0039]-[0042], for example.

¹⁰ See Appellants' originally filed specification at page 9, paragraph [0039], for example.

¹¹ See Appellants' originally filed specification at page 9, paragraphs [0039]-[0040], for example.

¹² See Appellants' originally filed specification at page 9, paragraphs [0039]-[0040], for example.

applied to the first bearing portion.¹³ The dispensing head include a second bearing portion (33) through which the longitudinal axis (X) passes so that the stem moves axially to a second open position when pressure is applied to the second bearing portion.¹⁴ The first inlet opening does not bear against the sealing portion in a closed position, and the second inlet opening bears against the sealing portion in the closed position.¹⁵

Claim 51 depends from Claim 1 and recites further features of the tilting valve. The opening/closing element is configured to move from the closed position to the first open position in response only to the force transmitted to the opening/closing element laterally to the longitudinal axis of the tilting valve.¹⁶

Claim 52 depends from Claim 1 and recites further features of the tilting valve. The opening/closing element is configured to move from the closed position to the first open position in response to the force transmitted to the opening/closing element laterally to the longitudinal axis of the tilting valve without any application of an axial force transmitted to the opening/closing element along the longitudinal axis.¹⁷

Claim 57 depends from Claim 1 and recites further features of the tilting valve. The valve body does not include a compressible member, separate from a return spring, configured to indicate different flow rates.¹⁸

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether Claims 1-4, 6, 8-22, 24-27, 29, and 43-57 are unpatentable under 35 U.S.C. § 103(a), as obvious over U.S. Patent No. 3,344,961 to Graham (hereinafter “Graham”) in view of U.S. Patent No. 6,296,155 to Smith.

¹³ See Appellants’ originally filed specification at page 9, paragraphs [0041]-[0042], for example.

¹⁴ See Appellants’ originally filed specification at page 9, paragraph [0041] and page 10, paragraph [0043], for example.

¹⁵ See Appellants’ originally filed specification at page 9, paragraph [0039], for example.

¹⁶ See Appellants’ originally filed specification at pages 9-10, paragraphs [0041]-[0043], for example.

¹⁷ See Appellants’ originally filed specification at pages 9-10, paragraphs [0041]-[0043], for example.

¹⁸ See Appellants’ originally filed specification at pages 9-10, paragraphs [0041]-[0043], and pages 4-5, paragraphs [0019]-[0020], for example.

VII. ARGUMENT

A. CLAIM 1

Appellants' invention, as recited in Claim 1, relates to a tilting valve for dispensing a product from a pressurized container. Claim 1 recites that the claimed tilting valve includes an opening/closing element that is capable, in response to a force transmitted to the opening/closing element *laterally* to a longitudinal axis of the tilting valve, of moving from a *closed* position to a *first open* position in which the product under pressure is dispensed at a first flow rate. The opening/closing element is also capable, in response to a force transmitted to the opening/closing element *parallel* to the longitudinal axis, of moving from the closed position to a second open position in which the product is dispensed at a second flow rate different from the first flow rate.

Appellants' invention improves upon conventional valves because, not only does it provide variable flow rates, it does so *by differentiating between the forces (lateral vs. parallel) responsible for the different flow rates*. The claimed valve thus leads to improved control for the user because the user can easily differentiate between the available flow rates by using *different movements* (tilting vs. depressing) to actuate the valve at the different rates.¹⁹ As explained in Appellants' specification, in conventional valves with variable-flow rates, such as the one described in Smith, flow rates are obtained by transmitting a force to the valve *in the same direction*, in particular by moving the valve stem downward.²⁰

Turning now to the applied references, Graham describes an aerosol dispensing device. Graham first describes a known spraying device, depicted in Figure 1 of Graham, that incorporates a spring 27 to bias a flange 19 against a sealing disc 10.²¹ The innovation described in Graham relates to the replacement of the spring 27 by a pin 132, as can be seen

¹⁹ See Appellant's specification at page 4, paragraph 19.

²⁰ See Appellant's specification at page 3, paragraph 12.

²¹ The Graham patent, from column 3, line 48 to column 4, line 37.

in Figures 2-8 of Graham.²² The rejection in the Final Action relies on the description of the spraying device with the spring depicted in Figure 1 of Graham.²³ In this device, the flange 19 defines a single metering hole 19, which connects a trough-like space 20 bounded by the flange 19 with the interior of a discharge tube 18.²⁴ As acknowledged by the Final Action,²⁵ Graham fails to teach first and second inlet apertures. Thus, Graham fails to teach the claimed opening/closing element that is capable of moving from a closed position to *two open positions* with different flow rates in response to two different forces, one transmitted laterally and one transmitted parallel to the longitudinal axis of the valve.

The Final Action rejects Appellants' claims based on the proposition that Smith discloses "first 50 and second 52 inlet apertures so a user can select different flow rates,"²⁶ and that it would have been obvious to modify "the Graham tilt valve with first and second inlet apertures as taught by Smith *so a user can select different flow rates.*"²⁷ "Section 103 forbids issuance of a patent when 'the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.'" *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1734, 82 USPQ2d 1385, 1391 (2007) (emphasis added). Appellants respectfully submit that *the subject matter as a whole* recited in independent Claim 1 would a not have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences

²² The Graham patent, column 1, lines 33-42.

²³ See outstanding Office Action at page 2 referring to Graham's column 4, lines 15-33.

²⁴ The Graham patent, column 3, lines 73-75.

²⁵ See outstanding Office Action at page 2, third paragraph.

²⁶ See outstanding Office Action at page 2, third paragraph.

²⁷ See outstanding Office Action at page 2, third paragraph (emphasis added).

between the claimed subject matter and the prior art, and (3) the level of skill in the art.

Graham v. John Deere Co., 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966). *See also KSR*, 127 S.Ct. at 1734, 82 USPQ2d at 1391. In this case, the differences between the claimed subject matter *as a whole* and the prior art *as a whole* support a conclusion that the present invention is nonobvious. In particular, neither Graham nor Smith, either alone or in combination, suggest a configuration which enables *differentiating between the forces (lateral vs. parallel) responsible for the different flow rates*.

The Supreme Court provided further guidance, emphasizing that “the principles laid down in *Graham* reaffirmed the ‘functional approach’ of *Hotchkiss*, 11 How. 248.” *KSR*, 127 S.Ct. at 1739, 82 USPQ2d at 1395 (citing *Graham v. John Deere Co.*, 383 U.S. 1, 12, 148 USPQ 459, 464 (1966) (emphasis added)), and reaffirmed principles based on its precedent that “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *Id.* The Court explained:

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, §103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

Id. at 1740, 82 USPQ2d at 1396. The operative question in this “functional approach” is thus “whether the improvement is more than the predictable use of prior art elements according to their established functions.” *Id.* In this case, Appellant recognizes that conventional devices concerned with flow rate differentiation are known to include more than one inlet aperture. Indeed, Appellant’s own specification discusses such valves at page 3, paragraphs [0012]-[0013]. However, the *claimed subject matter as a whole* is not merely directed to including a second aperture in the stem of a valve in the same manner as described in Smith, but instead

provides nonobvious improvements over these known variable-flow rate valves. In particular, Appellants' specification notes that conventional variable-flow rate valves obtain two flow rates by transmitting force to the valve in the *same direction* (more precisely, by moving the valve stem downward to a greater or lesser degree). By contrast, the claimed subject matter enables *differentiating between the forces (lateral vs. parallel) responsible for the different flow rates*.

The Supreme Court made clear with respect to the functional approach that “[f]ollowing these principles may be more difficult in other cases than it is here because the claimed subject matter may involve more than the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement.” *Id.* The Court explained, “[o]ften, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *Id.* at 1740-41, 82 USPQ2d at 1396.

In this case, the claimed subject matter involves more than the simple substitution of one known element for another and Appellant submits that there is no apparent reason to combine the known elements in Graham and Smith in the fashion recited in Claim 1.

Smith describes an aerosol dispensing apparatus with a valve body 22 that includes a stem 26, a biasing spring 28, and a gasket 30.²⁸ A portion of the stem 26 protrudes through a mounting cup 12 (which is attached to an aerosol canister) and supports an actuator button

²⁸ The Smith patent, column 4, lines 46-49.

24.²⁹ The stem 26 has at least one first radial orifice 50 and at least one second radial orifice 52.³⁰

In the closed position, shown in Figure 2 of Smith, the first radial orifice is blocked from flow by a seal formed between a gasket 30 and an annular sealing rib 70, and the second radial orifice 52 is directly blocked by engagement with gasket 30. A user must initially *depress* the actuator button 24 with a *downward motion*, causing the valve stem 26 to compress the biasing spring 28 and move the annular sealing rib 70 out of abutting engagement with the gasket 30, in order to produce a first flow.³¹ An elastomer compressible member 78 (or a compressible spherical ball 80) is incorporated within the actuator valve to provide additional depression resistance and to indicate to the operator a transition from the first low/fine product dispensing spray position to the second high/coarse dispensing position.³² The user must further apply increased *downward depression* force on the actuator button 24 in order to compress the compressible member in order to move the second radial orifice 52 below the gasket 30 and produce a second flow rate.³³ Thus, in the Smith device, the two flow rates are obtained *by transmitting a force to the valve in the same direction*, i.e., by moving the stem downward to a greater or lesser degree.

Upon reviewing Smith, a person of ordinary skill in the art at the time of the invention would not find any suggestion therein to differentiate between the forces (e.g., lateral vs. parallel) responsible for the different flow rates. Smith does not suggest flow rate differentiation by using different movements (tilting vs. depressing) to actuate the valve at the different rates. To the contrary, the object of Smith is to achieve two product flow rates “by merely applying downward pressured [sic] to the actuator button.”³⁴ Therefore, the

²⁹ The Smith patent, column 4, lines 59-62 and column 4, lines 20-25.

³⁰ The Smith patent, column 5, lines 4-5 and column 5, lines 17-18.

³¹ The Smith patent, column 6, lines 17-29.

³² The Smith patent, column 5, line 66 to column 6, line 5.

³³ The Smith patent, column 6, lines 66 to column 7 line 15.

³⁴ The Smith patent, column 1, lines 32-40.

combination of Graham and Smith fails to teach every element of the claimed invention. Specifically, the combination fails to teach or suggest the claimed tilting valve capable, in response to a force transmitted to the opening/closing element *laterally* to a longitudinal axis of the tilting valve, of moving from a *closed* position to a *first open* position in which the product under pressure is dispensed at a first flow rate, and in response to a force transmitted to the opening/closing element *parallel* to the longitudinal axis, of moving from the closed position to a second open position in which the product is dispensed at a second flow rate different from the first flow rate.

The Final Action states that the proposed modification would have been obvious “so a user can select different flow rates.”³⁵ Appellant disagrees that the description of multiple inlet apertures in a linear actuated valve, such as the one described in Smith, would provide an apparent reason to arrive at features recited in Claim 1. While Smith may provide a reason for using first and second inlet apertures in a valve assembly having a primary product dispensing rate and a secondary product dispensing rate that are achieved *by only applying downward pressure* to an actuator button, the teachings of Smith, *taken as a whole*, fail to suggest incorporating multiple apertures in a *tilt valve* such as the one disclosed in Graham. Appellants note that the Graham patent is *completely silent* as to multiple flow rates and the ability to differentiate those flow rates. Smith uses first and second apertures *in combination with* a compressible spherical ball or an elastomer compressible member in order to achieve two different flow rates. Smith, however, does not suggest that first and second apertures would work, *on their own*, in a tilt valve, much less “so a user can select different flow rates” in such a tilt valve.

Indeed, the minimal and dismissive analysis provided in the Final Action disregards the nuances of *the claimed subject matter as a whole*. In particular, Claim 1 recites that two

³⁵ See outstanding Office Action at page 2, lines 7-9.

different flow rates are achieved by in response to two different types of forces. In order for this type of flow differentiation to be possible, the inlet apertures on the valve stem need to be located so as to achieve different flow rates in response to different forces. Thus, it does not necessarily follow that the claimed tilting valve that is capable of the claimed flow differentiation can be achieved by the mere substitution of multiple inlets in a configuration that is intended for the type of flow differentiation described in Smith.

Instead, Smith teaches away from the present invention. Smith is directed to flow rate differentiation “without requiring any operator manipulation or intervention to alter the product dispensing flow [of] the valve.”³⁶ Smith achieves this objective by including an elastic member in the valve body that enables an operator to instantly sense that *further depression* of the valve stem will alter the product dispensing flow rates.³⁷ Thus, by teaching a valve that enables users to choose a flow rate based on the downward pressure on the valve stem without requiring any additional user manipulation, Smith teaches away from differentiating between the type of manipulation (e.g., lateral vs. parallel) responsible for the different flow rates.

Appellants therefore disagree with the Final Action’s assertion that a person of ordinary skill would find it obvious to modify the device in Graham by including a second inlet aperture “so a user can select different flow rates” based on the teaching of Smith. Essentially, an attempt to bring in the isolated teaching of Smith’s first and second apertures into the Graham tilt valve would amount to improperly picking and choosing features from different references without regard to the teachings of the references as a whole.³⁸

³⁶ The Smith patent, column 1, lines 54-56.

³⁷ The Smith patent, column 1, lines 43-45.

³⁸ See *In re Ehrreich* 590 F2d 902, 200 USPQ 504 (CCPA, 1979) (stating that patentability must be addressed “in terms of what would have been obvious to one of ordinary skill in the art at the time the invention was made in view of the sum of all the relevant teachings in the art, not in view of first one and then another of the isolated teachings in the art,” and that one “must consider the entirety of the disclosure made by the references, and avoid combining them indiscriminately.”)

Accordingly, even the combined teachings of Graham and Smith fail to disclose or suggest each limitation recited in independent Claim 1. It is respectfully requested that the rejection of independent Claim 1, and Claims 2-4, 6, 8-16, 55, and 56 depending therefrom, under 35 U.S.C. §103(a) as unpatentable over Graham in view of Smith be reversed.

B. CLAIM 17

Claim 17 relates to a valve for dispensing a product. Claim 17 recites that the valve includes a stem that is *radially movable* from a closed position to *a first open position* and *axially movable* from the closed position to *a second open position*. This configuration advantageously enables a user to *differentiate flow rates* based on *the direction* in which the claimed stem is actuated.

The Final Action fails to provide any specific analysis as to how the cited references render the features of this claim obvious. Indeed, the cited references fail to suggest the claimed stem. Graham includes only *a single open position* and Smith is directed to flow rate differentiation “without requiring any operator manipulation or intervention to alter the product dispensing flow [of] the valve.”³⁹ In particular, Smith describes that two flow rates are obtained *by transmitting a force to the valve in the same direction*, i.e., by moving the stem downward to a greater or lesser degree. A valve stem that is *axially movable* to achieve a first flow rate and then further *axially movable* to achieve a second flow rate is not valve includes a stem that is *radially movable* from a closed position to a first open position and *axially movable* from the closed position to a second open position.

Appellants further submit that, upon reviewing Graham and Smith, a person of ordinary skill in the art at the time of the invention would not find any suggestion to *differentiate flow rates* based on *the direction* in which the claimed stem is actuated. Indeed,

³⁹ The Smith patent, column 1, lines 54-56.

there is no apparent reason to combine the known elements in Graham and Smith to arrive at a valve includes a stem that is *radially movable* from a closed position to *a first open position* and *axially movable* from the closed position to *a second open position*.

Accordingly, even the combined teachings of Graham and Smith fail to disclose or suggest each limitation recited in independent Claim 17. It is respectfully requested that the rejection of independent Claim 17, and Claims 18-22, 24-27, and 29 depending therefrom, under 35 U.S.C. §103(a) as unpatentable over Graham in view of Smith be reversed.

C. CLAIM 43

Claim 43 relates to a device for dispensing a product. Claim 43 recites that the device includes a stem having a passage emerging at an outlet opening, a first inlet opening, and a second inlet opening. Claim 43 further recites that the device includes a dispensing head coupled to the stem. The dispensing head includes a first bearing portion at a distance from a longitudinal axis of the stem so that the stem *tilts to a first open position* when pressure is applied to the first bearing portion. The dispensing head also includes a second bearing portion through which the longitudinal axis passes so that the stem *moves axially to a second open position* when pressure is applied to the second bearing portion.

The Final Action fails to provide any specific analysis as to how the cited references render the features of this claim obvious. Figures 1, 2, and 5 of Smith depict an actuator button 24 that appears to include only a *single* bearing surface. This configuration would be consistent with the teaching of Smith, which describes that different flow rates are achieved by *varying the degree of axial depression* of the button 24, and does not suggest a configuration in which a stem *tilts to a first open position*. Graham fails to suggest more than one open position.

Furthermore, Appellants submit that there is no apparent reason to combine the known elements in Graham and Smith to arrive at a the claimed configuration. Specifically, the teachings of Smith *as a whole* describe that flow rate differentiation is achieved by including an elastic member in the valve body that enables an operator to instantly sense that *further depression* of a valve stem will alter the product dispensing flow rates, not including a stem that *tilts* to a first open position and *moves axially* to a second open position.

Accordingly, even the combined teachings of Graham and Smith fail to disclose or suggest each limitation recited in independent Claim 43. It is respectfully requested that the rejection of independent Claim 43, and Claims 44-50 depending therefrom, under 35 U.S.C. §103(a) as unpatentable over Graham in view of Smith be reversed.

D. CLAIM 51

Claim 51 depends from Claim 1. Claim 51 recites that the opening/closing element is configured to move from the closed position to the first open position in response *only* to the force transmitted to the opening/closing element *laterally to said longitudinal axis of the tilting valve*.

By contrast, Smith describes valve actuation in response to a force that is transmitted *axially* with respect to the valve stem in Smith, and expounds the benefits of flow rate differentiation “without requiring any operator manipulation or intervention to alter the product dispensing flow [of] the valve.”⁴⁰ Graham does describe a valve that is actuated by tilting, but Appellants submit that there is no apparent reason to combine the known elements in Graham and Smith to arrive at a the claimed configuration.

Accordingly, even the combined teachings of Graham and Smith fail to disclose or suggest each limitation recited in dependent Claim 51. It is respectfully requested that the

⁴⁰ The Smith patent, column 1, lines 54-56.

rejection of dependent Claim 51, and Claim 53 depending therefrom, under 35 U.S.C. §103(a) as unpatentable over Graham in view of Smith be reversed.

E. CLAIM 52

Claim 52 depends from Claim 1. Claim 52 recites that the opening/closing element is configured to move from the closed position to the *first open position* in response to the force transmitted to the opening/closing element *laterally* to the longitudinal axis of the tilting valve *without any application of an axial force transmitted to the opening/closing element along the longitudinal axis*.

By contrast, Smith describes that a user must initially *depress* the actuator button 24 with a *downward motion*, causing the valve stem 26 to compress the biasing spring 28 and move the annular sealing rib 70 out of abutting engagement with the gasket 30, in order to produce a first flow.⁴¹ Graham only describes a single open position. The Final Action relies on Smith for its description of multiple flow rates. Appellants note that while Smith may provide a reason for using first and second inlet apertures in a valve assembly having a primary product dispensing rate and a secondary product dispensing rate that are achieved by *only applying downward pressure* to an actuator button, the teachings of Smith, *taken as a whole*, fail to suggest incorporating multiple apertures in a *tilt valve* such as the one disclosed in Graham in order to arrive at the claimed opening/closing element that is configured to move from the closed position to the *first open position* in response to the force transmitted to the opening/closing element *laterally* to the longitudinal axis of the tilting valve *without any application of an axial force transmitted to the opening/closing element along the longitudinal axis*.

⁴¹ The Smith patent, column 6, lines 17-29.

Accordingly, even the combined teachings of Graham and Smith fail to disclose or suggest each limitation recited in dependent Claim 52. It is respectfully requested that the rejection of dependent Claim 52, and Claim 54 depending therefrom, under 35 U.S.C. §103(a) as unpatentable over Graham in view of Smith be reversed.

F. CLAIM 57

Claim 57 depends from Claim 1 and recites, *inter alia*, that the valve body does not include a compressible member, separate from a return spring, configured to indicate different flow rates. As discussed above, the valve described in Claim 1 provides variable flow rates by differentiating between the forces (lateral vs. parallel) responsible for the different flow rates. Thus, dependent Claim 57, in combination with independent Claim 1, patentably defines over any reasonable combination of the Graham and Smith patents.

Smith is directed to *flow rate differentiation* “without requiring any operator manipulation or intervention to alter the product dispensing flow [of] the valve.”⁴² Smith achieves this objective by *including a compressible member* in the valve body that enables an operator to instantly sense that *further depression* of the valve stem will alter the product dispensing flow rates.⁴³

The Final Action asserts that it would be obvious to combine the Graham and Smith patents “so a user can select different flow rates” and points to the Abstract of Smith for support. In the Abstract, Smith describes that a primary low/fine product dispensing flow rate is achieved upon initial vertical depression of the valve stem while a high/coarse product dispensing flow rate is achieved upon maximum vertical depression of the valve stem. The Abstract of Smith also describes that an internal compressible member is located within the valve assembly to provide a detectable indication, to an operator of the valve assembly, that

⁴² The Smith patent, column 1, lines 54-56.

⁴³ The Smith patent, column 1, lines 43-45.

further depression of the valve stem will increase the product flow dispensing rate from the primary low/fine dispensing rate to the secondary high/coarse dispensing rate.

Thus, upon review of Smith, a person of ordinary skill in the art at the time of the invention who was interested in achieving user selectable flow rates would recognize that an internal compressible member is a *necessary* element of the flow rate differentiation described in Smith. As a user *cannot select* different flow rates without being able to *differentiate* between different flow rates, and as the internal compressible member described in Smith performs the flow rate differentiation function, the internal compressible member *is an essential element* for enabling a user to select different flow rates in the valve described in Smith. Therefore, any reasonable combination of Graham and Smith that is performed “so a user can select different flow rates” would include an internal compressible member to enable a user to differentiate between flow rates in order to select different flow rates. By contrast, Claim 57 recites that the valve body does not include a compressible member, separate from a return spring, configured to indicate different flow rates.

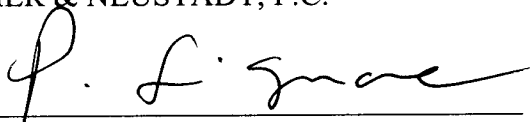
Accordingly, even the combined teachings of Graham and Smith fail to disclose or suggest each limitation recited in dependent Claim 57. It is respectfully requested that the rejection of dependent Claim 57 under 35 U.S.C. §103(a) as unpatentable over Graham in view of Smith be reversed.

G. CONCLUSION

In view of the foregoing, it is respectfully submitted that the cited references, whether considered alone or in combination, fail to disclose or suggest the combined features set forth in 1-4, 6, 8-22, 24-27, 29, and 43-57. Accordingly, it is respectfully requested that the rejections of Claims 1-4, 6, 8-22, 24-27, 29, and 43-57 be reversed.

Respectfully submitted,

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VIII. CLAIMS APPENDIX

Claim 1 (Rejected): A tilting valve for dispensing a product from a pressurized container, comprising:

an opening/closing element with at least two inlet apertures, the opening/closing element being capable, in response to a force transmitted to the opening/closing element laterally to a longitudinal axis of said tilting valve, of moving from a closed position to a first open position in which the product under pressure is dispensed at a first flow rate and, in response to a force transmitted to the opening/closing element parallel to the longitudinal axis, of moving from the closed position to a second open position in which the product is dispensed at a second flow rate different from the first flow rate.

Claim 2 (Rejected): The valve according to Claim 1, further comprising a valve body, and

wherein the opening/closing element includes a valve stem with a portion which emerges outside the valve body, said valve stem being traversed by an axial channel emerging outside the valve body via an outlet aperture and via at least two inlet apertures which, in the closed position, are isolated from the valve body.

Claim 3 (Rejected): The valve according to Claim 2, further comprising a sealing element, and wherein the valve stem includes an annular portion placed inside the valve body, said annular portion incorporating a lip capable, in the closed position, of bearing against the sealing element so as to define in conjunction with said sealing element an annular space isolated from the valve body, with a first inlet aperture emerging inside the annular space.

Claim 4 (Rejected): The valve according to Claim 3, wherein at least one second inlet aperture emerges laterally against said sealing element, in the closed position.

Claim 5 (Withdrawn).

Claim 6 (Rejected): The valve according to Claim 2, wherein said at least two inlet apertures include a first and a second inlet apertures with identical cross-sections.

Claim 7 (Withdrawn).

Claim 8 (Rejected): A device for packaging and dispensing a product, comprising:
a pressurized container holding the product to be dispensed, and
a tilt valve according to Claim 1 coupled to said pressurized container.

Claim 9 (Rejected): A device according to Claim 8, further comprising an actuating element to actuate the tilt valve and dispense the product under pressure via at least one dispensing aperture.

Claim 10 (Rejected): A device according to Claim 9, wherein the actuating element includes two distinct bearing surfaces, a first bearing surface for moving the opening/closing element laterally and a second bearing surface for moving the opening/closing element axially.

Claim 11 (Rejected): The device according to Claim 10, wherein said product is one of a hair product, a personal hygiene product, a make-up product, a skincare product, and a sunscreen product.

Claim 12 (Rejected): The valve according to Claim 3, wherein said sealing element is an annular seal placed inside said valve body.

Claim 13 (Rejected): The device according to Claim 1, wherein said product is a cosmetic product.

Claim 14 (Rejected): The device according to Claim 8, wherein said product is a cosmetic product.

Claim 15 (Rejected). The device according to Claim 9, wherein said at least one dispensing aperture is located inside a nozzle.

Claim 16 (Rejected): The device according to Claim 15, wherein said nozzle is a swirl nozzle.

Claim 17 (Rejected): A valve for dispensing a product, comprising:
a body;
a sealing portion coupled to said body;
a stem coupled to said sealing portion, said stem being radially movable from a closed position to a first open position and axially movable from said closed position to a second

open position, said stem having a passage emerging at an outlet opening, a first inlet opening, and a second inlet opening; and

a peripheral portion coupled to said stem and to said sealing portion so as to define a peripheral space around said stem, said peripheral space being isolated from an interior space of said body in said closed position and being open to said interior space in said first and second open positions,

wherein said first inlet opening communicates with said peripheral space in said closed position, and said second inlet opening bears against said sealing portion in said closed position.

Claim 18 (Rejected): The valve according to Claim 17, wherein said channel emerges radially at said first and second inlet openings.

Claim 19 (Rejected): The valve according to Claim 18, wherein said channel emerges axially at said outlet opening.

Claim 20 (Rejected): The valve according to Claim 17, wherein said peripheral portion is annular.

Claim 21 (Rejected): The valve according to Claim 17, wherein said peripheral portion is attached to said stem and includes a lip with an edge which reaches said sealing portion in said closed position.

Claim 22 (Rejected): The valve according to Claim 21, wherein at least a portion of said edge does not reach said sealing portion in said first and second open positions.

Claim 23 (Withdrawn).

Claim 24 (Rejected): The valve according to Claim 17, wherein said second inlet opening is oblong in shape.

Claim 25 (Rejected): The valve according to Claim 17, wherein said outlet opening communicates with a dispensing head.

Claim 26 (Rejected): The valve according to Claim 17, wherein said product is a cosmetic product.

Claim 27 (Rejected): The valve according to Claim 17, wherein said first and second inlet openings have a same angular position on said stem.

Claim 28 (Withdrawn).

Claim 29 (Rejected): The valve according to Claim 17, wherein said first and second inlet openings have a same cross-section.

Claims 30- 42 (Withdrawn).

Claim 43 (Rejected): A device for dispensing a product, comprising:

a body;

a sealing portion coupled to said body;

a stem coupled to said sealing portion, said stem having a passage emerging at an outlet opening, a first inlet opening, and a second inlet opening; and

a dispensing head coupled to said stem, said channel emerging into said dispensing head at said outlet opening, wherein said dispensing head includes a first bearing portion at a distance from a longitudinal axis of said stem so that said stem tilts to a first open position when pressure is applied to said first bearing portion, said dispensing head including a second bearing portion through which said longitudinal axis passes so that said stem moves axially to a second open position when pressure is applied to said second bearing portion,

wherein said first inlet opening does not bear against said sealing portion in a closed position, and said second inlet opening bears against said sealing portion in said closed position.

Claim 44 (Rejected): The device according to Claim 43, further comprising a peripheral portion coupled to said sealing portion and to said stem so as to define a peripheral space around said stem, said peripheral space being isolated from an interior space of said body in said closed position and being open to said interior space in said first and second open positions.

Claim 45 (Rejected): The device according to Claim 43, wherein said first and second bearing portions define surfaces on two different planes.

Claim 46 (Rejected): The device according to Claim 45, wherein said surfaces defined by said first and second bearing portions are parallel to each other.

Claim 47 (Rejected): The device according to Claim 43, wherein said channel emerges radially at said first and second inlet openings.

Claim 48 (Rejected): The device according to Claim 43, wherein said peripheral portion is attached to said stem and includes a lip with an edge which reaches said sealing portion in said closed position.

Claim 49 (Rejected): The device according to Claim 48, wherein at least a portion of said edge does not reach said sealing portion in said first and second open positions.

Claim 50 (Rejected): The device according to Claim 43, wherein said product is a cosmetic product.

Claim 51 (Rejected): The valve according to Claim 1, wherein said opening/closing element is configured to move from said closed position to said first open position in response only to said force transmitted to the opening/closing element laterally to said longitudinal axis of said tilting valve.

Claim 52 (Rejected): The valve according to Claim 1, wherein said opening/closing element is configured to move from said closed position to said first open position in response to said force transmitted to the opening/closing element laterally to said longitudinal axis of said tilting valve without any application of an axial force transmitted to the opening/closing element along the longitudinal axis.

Claim 53 (Rejected): The valve according to Claim 51, wherein said opening/closing element is configured to move from said first open position to said second open position in response only to said force transmitted to the opening/closing element parallel to the longitudinal axis.

Claim 54 (Rejected): The valve according to Claim 52, wherein said opening/closing element is configured to move from said first open position to said second open position in response to said force transmitted to the opening/closing element parallel to said longitudinal axis of said tilting valve without any application of a force transmitted to the opening/closing element laterally the longitudinal axis.

Claim 55 (Rejected): The valve according to Claim 3, wherein the lip is configured to disengage from the sealing element and follow an angular path in response to said force transmitted to the opening/closing element laterally to said longitudinal axis of said tilting valve.

Claim 56 (Rejected): The valve according to Claim 3, wherein the valve stem is configured to follow an angular path in response to said force transmitted to the opening/closing element laterally to said longitudinal axis of said tilting valve.

Claim 57 (Rejected): The valve according to Claim 3, wherein the valve body does not include a compressible member, separate from a return spring, configured to indicate different flow rates.

IX. EVIDENCE APPENDIX

None.

X. RELATED PROCEEDINGS APPENDIX

None.